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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,807	02/19/2002	Norbert Ehmer	10543-028	2615

7590 07/13/2004  
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EXAMINER

HERNANDEZ, OLGA

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/914,807

Applicant(s)

EHMER ET AL.

Examiner

Olga Hernandez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/7/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19,24-30,32-40 and 42 is/are rejected.
- 7) ☒ Claim(s) 20-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Response to Arguments***

Applicant's arguments filed 6/7/04 have been fully considered but they are not persuasive. The applicant argues that Henry does not teach detecting a diagonal axle twist. The examiner disagrees. Henry discloses "as a result of diagonal axle (column 1) walk relative to the vehicle frame." Moreover, the applicant argues that Howes does not teach the diagonal axle twist. Again, the examiner disagrees. Howes discloses comparing the speeds of diagonally opposite wheels." Regarding the 112 rejection, it is unclear the way the applicant is claiming the invention. Therefore, the rejection is repeated and made final.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Henry et al (3,707,298).

Henry discloses a vehicle axle is subject to torsional forces not only as a result of braking and driving torque but also as a result of diagonal axle walk relative to the vehicle frame which occurs when the wheels at the opposite ends of the axle encounter unlike irregularities in a road or off-the-road surface and conversely when the vehicle frame tilts or rolls relative to the axle (column 1, lines 7-32).

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3. Claims 28-36, 40 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Howes et al (5,373,447).

Howes teaches comparing the speeds of diagonally opposite wheels of the vehicle 1, the entry threshold for traction control initiated by detecting wheel spin of the inside wheel during cornering is effectively raised. This has the advantage that false triggering caused, for instance, when the inside driven wheel carries reduced weight or lifts off the ground is substantially reduced. For instance, in a typical situation, the difference in wheel speeds between the inside and outside wheels of the vehicle may be 3 kilometers per hour. The spin threshold  $V_t$  may typically be 6 kilometers per hour. Thus, the spin threshold applicable to the inside wheel becomes approximately 9 kilometers per hour so that false or unnecessarily early triggering of traction control from the inside driven wheel is prevented or reduced under conditions when the performance of the vehicle is not compromised. According to the invention, rotational speed sensors of a conventional ABS brake system are advantageously used as a sensor arrangement and the fluid control modules are capable of comparing the slip values of the wheels with one another and/or with stored slip values of a conventional ABS braking operation and, in the event of an extreme variation of the slip values, of determining that one wheel of a brake circuit is not being braked, i.e. said brake circuit has failed. There is therefore no need for separate sensors for determining a brake circuit failure. Alternatively or additionally, sensors specially geared towards determining a brake circuit failure, e.g. pressure sensors at the brake lines, may be provided. See figure 1.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry et al (3,707,298) in view of Leiber (4,589,511).

Henry et al. disclose a method of controlling a vehicle, as claimed, except for the use of the wheel brakes to control the vehicle. Leiber discloses a method of controlling a vehicle brakes so that the associated differential or other differentials will apply full traction to the other wheels (col. 1, lines 49-60). It would have been obvious at the time of the invention to utilize the brake controls of Leiber on the vehicle of Henry et al. in response to the spinning of wheels to control the vehicle.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 19-27, 37-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 19, the preamble states: "monitoring the behavior of the vehicle wheels," meaning at least two wheels, then it is stated that the two diagonally opposite

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wheels lose traction and provides a third wheels with sufficient traction. How does the third wheel that has not been detected to have or not the traction will be provided with the torque?

As per claim 37, it is indicated in line 3, "the prior 15 seconds." Which is unclear, because it has not been mentioned before 15 seconds.

*Allowable Subject Matter*

8. Claims 20-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

*Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

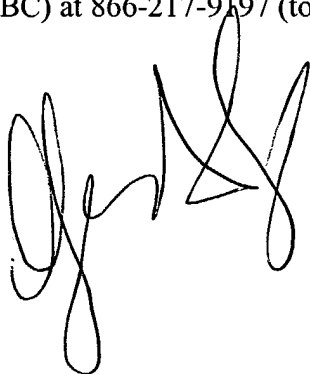
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Hernandez whose telephone number is (703) 305-0918. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703) 305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Olga Hernandez  
Examiner  
Art Unit 3661



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